

WHAT IS CLAIMED IS:

1. An electric operation apparatus comprising:
a high-frequency current generating means for delivering high-frequency output power with which high-frequency current is conducted to a living tissue for the purpose of remedy;

an output changing means for changing high-frequency output power that is delivered by said high-frequency current generating means; and

a control means for controlling said output changing means so that delivery of high-frequency output power will be repeatedly continued and discontinued.

2. An electric operation apparatus according to Claim 1, further comprising a coagulated state judging means that judges the coagulated state of the living tissue, wherein said control means controls said output changing means according to the result of judgment made by said coagulated state judging means.

3. An electric operation apparatus according to Claim 2, wherein said control means determines based on information transferred from said coagulated state judging means the timing of discontinuing delivery of high-frequency

output power.

4. An electric operation apparatus according to Claim 2, wherein said coagulated state judging means includes a detecting means that detects biomedical information of the living tissue, and receives the biomedical information from the detecting means.

5. An electric operation apparatus according to Claim 2, wherein said coagulated state judging means judges the coagulated state of the living tissue according to the biomedical information of the living tissue, the number of times of repetition of continuation and discontinuation of delivery, or both the biomedical information of the living tissue and the number of times of repetition of continuation and discontinuation of delivery.

6. An electric operation apparatus according to Claim 2, wherein when said coagulated state judging means judges that coagulation of the living tissue has been completed, said control means controls said output changing means so that repetition of continuation and discontinuation of delivery of high-frequency output power will be terminated.

7. An electric operation apparatus according to Claim

2, wherein said control means controls said output changing means so that delivery of high-frequency will be repeatedly continued and discontinued in order to thus change the magnitude of high-frequency current conducted with high-frequency output power.

8. An electric operation apparatus according to Claim 2, wherein said coagulated state judging means judges the coagulated state of the living tissue from an amount of high-frequency current that is conducted to the living tissue.

9. An electric operation apparatus according to Claim 5, wherein said coagulated state judging means judges the coagulated state of the living tissue from biomedical information acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued.

10. An electric operation apparatus according to Claim 5, wherein said coagulated state judging means judges the coagulated state of the living tissue from the biomedical information acquired during a plurality of pause periods during which delivery of high-frequency output power is

discontinued.

11. An electric operation apparatus according to Claim 5, wherein said control means determines the level of high-frequency output power according to the result of judgment made by said coagulated state judging means.

12. An electric operation apparatus according to Claim 9, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing the biomedical information with a predetermined threshold.

13. An electric operation apparatus according to Claim 9, wherein said coagulated state judging means judges the coagulated state of the living tissue using at least one of a maximum value and a minimum value of biomedical information acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued.

14. An electric operation apparatus according to Claim 9, wherein said coagulated state judging means judges the coagulated state of the living tissue using an initial value of biomedical information acquired during each delivery

period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued.

15. An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing biomedical information, which is acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued, with biomedical information acquired during the first delivery period of high-frequency output power or during the first pause period thereof.

16. An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of a maximum value and a minimum value of biomedical information, which are acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued, with at least one of a maximum value and a minimum value of biomedical information that are acquired during the first delivery

period of high-frequency output power or during the first pause period thereof.

17. An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of a maximum value and a minimum value of biomedical information, which are acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued, with at least one of a maximum value and a minimum value of biomedical information that are acquired during the first delivery period of high-frequency output power or during the first pause period thereof.

18. An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of biomedical information acquired at the start of each delivery period during which high-frequency output power is delivered and biomedical information acquired during each pause period during which delivery of high-frequency output power is discontinued with at least one of biomedical information acquired at the start of the first delivery

period of high-frequency output power and biomedical information acquired during the first pause period thereof.

19. An electric operation apparatus according to Claim 10, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing biomedical information, which is acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued, with biomedical information acquired during an immediately preceding delivery period of high-frequency output power or during an immediately preceding pause period thereof.

20. An electric operation apparatus according to Claim 19, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of a maximum value and a minimum value of biomedical information, which are acquired during each delivery period during which high-frequency output power is delivered or during each pause period during which delivery of high-frequency output power is discontinued, with at least one of a maximum value and a minimum value of biomedical information that are acquired during an immediately preceding delivery period of high-frequency output power or

during an immediately preceding pause period thereof.

21. An electric operation apparatus according to Claim 19, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing at least one of biomedical information acquired at the start of each delivery period during which high-frequency output power is delivered and biomedical information acquired during each pause period during which delivery of high-frequency output power is discontinued with at least one of biomedical information acquired at the start of the first delivery period of high-frequency output power and biomedical information acquired during the first pause period thereof.

22. An electric operation apparatus according to Claim 21, wherein said coagulated state judging means judges the coagulated state of the living tissue by comparing biomedical information, which is acquired at the start of each delivery period during which high-frequency output power is delivered, with biomedical information acquired during an immediately preceding pause period during which delivery of high-frequency output power is discontinued.

23. An electric operation apparatus comprising:
a high-frequency current generating means for

delivering high-frequency output power with which high-frequency current is conducted to a living tissue for the purpose of remedy;

an output changing means for changing high-frequency output power that is delivered by said high-frequency current generating means; and

a control means for controlling said output changing means so that high-frequency output power of the first level and high-frequency output power of the second level different from the first level will be delivered alternately.

24. An electric operation apparatus according to Claim 23, wherein: said control means controls said output changing means so that: if high-frequency current conducted with high-frequency output power of the first level meets a first condition, high-frequency output power of the second level will be delivered; and if the high-frequency current meets a second condition, high-frequency output power of the first level will be delivered.

25. An electric operation apparatus according to Claim 24, wherein said control means controls said output changing means so that high-frequency output power of the first level and high-frequency output power of the second level will be delivered alternately in order to thus change the magnitude

of high-frequency current conducted with output power.

26. An electric operation apparatus according to Claim 24, further comprising a coagulated state judging means that judges the coagulated state of the living tissue, wherein said control means controls said output changing means according to the result of judgment made by said coagulated state judging means.

27. An electric operation apparatus according to Claim 26, wherein said control means delivers high-frequency output power of the second level according to the result of judgment made by said coagulated state judging means.

28. An electric operation apparatus according to Claim 26, wherein said coagulated state judging means judges the coagulated state of the living tissue from biomedical information of the living tissue, the number of times of delivery of output power of the first level and the number of times of delivery of output power of the second level, or both the biomedical information and the numbers of times of delivery.

29. An electric operation apparatus according to Claim 26, wherein when said coagulated state judging means judges

that coagulation of the living tissue has been completed, said control means controls said output changing means so that alternation of high-frequency output power of the first level and high-frequency output power of the second level will be terminated.

30. An electric operation apparatus according to Claim 27, wherein high-frequency output power of the second level does not substantially raise the temperature of the living tissue.